



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,569	12/22/2003	Jeffrey D. Rupp	FGT 1852 PA	1568
28549	7590	07/28/2004	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			HERNANDEZ, OLGA	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/707,569		RUPP, JEFFREY D.	
	Examiner		Art Unit	
	Olga Hernandez		3661	<i>MLW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/22/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-10, 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirabayashi et al (5,874,904).

As per claims 1 and 9, Hirabayashi discloses a single vision sensor having apposition on the vehicle, detecting at least one object, and generating at least one object detection signal; and a controller coupled to the vision sensor and generating a safety system signal in response to the position and the at least one object detection signal (figures 1, 7, 8, 14, 19 and 21, columns 1 and 2).

As per claim 2, Hirabayashi discloses the use of images, which is inherent, they are two-dimension.

As per claim 3, Hirabayashi discloses the use of a CCD linear sensor (column 1, lines 31-35).

As per claims 5, 6 and 10, Hirabayashi discloses determining the position of the vision sensor relative to a predetermined reference on the vehicle (column 1, lines 60-67 and column 2, lines 1-13).

As per claims 7 and 15-17, Hirabayashi discloses the size and up-angle of the at least one object and in response thereto determines range of the at least one object (column 2, lines 65-67 and column 3, lines 1-20).

Art Unit: 3661

As per claim 8, Hirabayashi discloses a memory coupled to the controller and storing information regarding the position (figure 24).

As per claims 13 and 14, Hirabayashi discloses determining object parameters and generating the safety system signal in response to the object parameter (column 3, lines 30-53).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al (5,874,904) in view of Breed et al (6,405,132).

As per claims 4 and 18, Hirabayashi does not teach the use of a cruise control.

However, teaches it in column 9, lines 50-52. Therefore, it would have been obvious to one skill in the art to combine the aforementioned inventions in order to avoid accidents.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al (5,874,904).

Hirabayashi does not teach determining the at least one object to be at the same elevation at the vehicle; and generating the object detection signal in response to the initial determination. However, as the claim specifies is an assumption, which is the

Art Unit: 3661

same as the prior art does, when determines range of the at least one object (column 2, lines 65-67 and column 3, lines 1-20).

6. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi et al (5,874,904) in view of Kurahashi et al (5,529,139).

As per claim 12, Hirabayashi does not teach reducing the speed of the at least one detected object when the size of the object appear to increase. However, Kurahashi teaches how to control the speed of the detected object/vehicle based on the distance between vehicles, which is the same when increase the size of the detected object (abstract). Therefore, it would have been obvious to one skill in the art to combine the aforementioned inventions in order to maintain constant inter-vehicle distance.

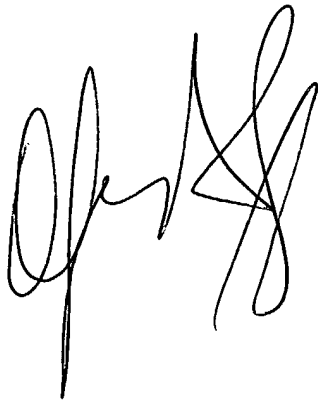
As per claim 20, Hirabayashi discloses a single vision sensor having apposition on the vehicle, detecting at least one object, and generating at least one object detection signal; and a controller coupled to the vision sensor and generating a safety system signal in response to the position and the at least one object detection signal (figures 1, 7, 8, 14, 19 and 21, columns 1 and 2); the size and up-angle of the at least one object and in response thereto determines range of the at least one object (column 2, lines 65-67 and column 3, lines 1-20). Hirabayashi does not teach reducing the speed of the at least one detected object when the size of the object appear to increase. However, Kurahashi teaches how to control the speed of the detected object/vehicle based on the distance between vehicles, which is the same when increase the size of the detected object (abstract). Therefore, it would have been obvious to one skill in the art to combine the aforementioned inventions in order to maintain constant inter-vehicle distance.

Art Unit: 3661

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Hernandez whose telephone number is (703) 305-0918. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'O. Hernandez', with a stylized, overlapping loop at the end.

Olga Hernandez
Examiner
Art Unit 3661